



PIER Energy System Integration Program Area

DER Partnership Interconnection and Market Integration

Contract #: 500-02-014 **Work Authorization #:** E2I-WA-100

Contractor: Electricity Innovation Institute

Subcontractors: Electric Power Research Institute (EPRI): John Nimmons & Associates, Inc. : Madison Energy Consultants, LLC : Energy & Environmental Economics, Inc. : Regulatory Assistance Project

Project Amount: \$500,000

Match Amount: \$395,000

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Status: Active

Project Description:

Distributed energy resources (DER) have the potential to significantly transform the relationship of utilities and customers, and to introduce a much richer set of tools for providing not only power, but also reliability, security, flexibility and power quality in energy systems. With strong support and incentives, DER could account for a significant portion of total electricity generation in the US by 2020.

Electricity Innovation Institute has initiated the Distributed Energy Resources Public/Private Partnership to assemble key public and private stakeholders to work collaboratively to address barriers facing integration of DER into the market. The stakeholders represent utilities, government (state and federal), regulators, DER equipment manufacturers and developers, and consumers. This partnership will help to overcome some of today's obstacles to greater DER deployment. The result will be a more dynamic and robust electricity system that meets customer needs and a more viable, predictable, and growing market for DER applications.

In 2004, the partnership assisted Southern California Edison (SCE) with the development of a competitive solicitation for DER to defer several distribution upgrade projects. This was accomplished via a collaborative approach between SCE, the DER industry, and DER equipment manufacturers.

The objectives of this Agreement are to:

- Assist SCE through a collaborative process.
- Develop a solicitation for a DER project that could defer several distribution projects where all participants benefit from the process.

This project supports the PIER Program objectives of:

- Improving the Energy Cost/Value of California's Electricity by developing win-win approaches for encouraging distributed energy resources. DER can provide lower cost energy for consumers, and can support the grid to reduce congestion with smaller, more efficient generators which are easier to site than central power plants.
- Providing greater choices for California consumers by encouraging DER market integration that simplifies consumer installations.

Proposed Outcome:

1. Develop a solicitation for SCE to successfully acquire DER projects that will defer distribution system upgrades.

Actual Outcomes:

1. The reliability requirement for “physical assurance” has been made more flexible. Originally, SCE was going to require load reduction or “demand limitation” at all times when the distributed generator is not operating. This would have created real burdens for customers otherwise willing to help the utility. Instead, SCE will limit the requirement to 200 to 400 hours per year, with a daily limitation as well, and will make allowances for customer maintenance outages.
2. DG customers and third-party providers need to know whether it’s worth the considerable time and expense it will take to respond to a utility DG solicitation. SCE’s starting point was that no price or value would be included in its RFP, and proposals would be considered sealed bids, to take or leave. Based on the collaborating partners' input, SCE will now include a ‘market reference price’ to guide customers, and will negotiate the final agreement with successful proposers.
3. The Model Agreement to be entered into with successful proposers was originally designed such that the utility would take virtually none of the risk. Collaborative discussions persuaded SCE to rewrite it to share more of the risks, and collaborative participants are satisfied that it meets many of the needs of prospective proposers.

Project Status:

The project final report is in the publication process. Following SCE’s solicitation in 2005, an evaluation will be done to determine the effectiveness of the collaborative process in assisting SCE in developing a successful deferment solicitation.